

## CLAIMS

What is claimed is:

- 1    1.     An electronic circuit package comprising:  
2            at least one non-insertable feature at a first surface of the electronic circuit  
3 package; and  
4            at least one insertable feature extending perpendicularly from the first surface.
- 1    2.     The electronic circuit package as claimed in claim 1, wherein the electronic  
2 circuit package comprises an integrated circuit package.
- 1    3.     The electronic circuit package as claimed in claim 1, wherein the at least one non-  
2 insertable feature includes a land grid array land.
- 1    4.     The electronic circuit package as claimed in claim 1, wherein the at least one  
2 insertable feature includes a pin.
- 1    5.     The electronic circuit package as claimed in claim 1, wherein the at least one  
2 insertable feature includes a low insertion force feature.
- 1    6.     The electronic circuit package as claimed in claim 1, wherein a total feature count  
2 is greater than 400 features, and the total feature count is a sum of a first number of non-  
3 insertable features and a second number of insertable features.
- 1    7.     The electronic circuit package as claimed in claim 1, wherein the at least one non-  
2 insertable feature is coupled to circuits that use or produce input/output signals, and the at  
3 least one insertable feature is electrically coupled to circuits that consume power or  
4 require ground connection.
- 1    8.     A receptacle comprising:

2           at least one non-insertable contact at a first surface of the receptacle; and  
3           at least one insertable contact having an opening on the first surface,  
4           wherein the at least one non-insertable contact and the at least one insertable  
5           contact are arranged to make electrical contact with non-insertable features and insertable  
6           features of a single electronic circuit package brought into contact with the receptacle.

1    9.     The receptacle as claimed in claim 8, wherein the receptacle comprises a socket.

1    10.    The receptacle as claimed in claim 8, wherein the receptacle comprises a printed  
2           circuit board.

1    11.    The receptacle as claimed in claim 8, wherein the at least one non-insertable  
2           contact includes a land grid array contact.

1    12.    The receptacle as claimed in claim 8, wherein the at least one insertable contact  
2           includes a pin contact.

1    13.    The receptacle as claimed in claim 8, wherein the at least one insertable contact  
2           includes a low insertion force contact.

1    14.    A method comprising:  
2           forming one or more non-insertable features at a first surface of an electronic  
3           circuit package; and  
4           attaching one or more insertable features perpendicularly from the first surface.

1    15.    The method of claim 14, wherein forming the one or more non-insertable features  
2           comprises forming one or more lands.

1    16.    The method of claim 14, wherein attaching the one or more insertable features  
2           comprises attaching one or more low insertion force contacts.

- 1 17. A method for fabricating a receptacle for accepting a single electronic circuit  
2 package, the method comprising:  
3 forming one or more non-insertable contacts at a first surface of the receptacle;  
4 and  
5 forming one or more insertable contacts having openings at the first surface.
- 1 18. The method of claim 17, wherein forming the one or more non-insertable contacts  
2 comprises forming one or more land grid array contacts.
- 1 19. The method of claim 17, wherein forming the one or more insertable contacts  
2 comprises forming one or more low insertion force contacts.
- 1 20. A method comprising:  
2 aligning an electronic circuit package with a receptacle, wherein the electronic  
3 circuit package comprises at least one non-insertable feature at a first package surface,  
4 and at least one insertable feature extending perpendicularly from the first package  
5 surface, and wherein the receptacle comprises at least one non-insertable contact at a first  
6 receptacle surface, and at least one insertable contact having an opening on the first  
7 receptacle surface; and  
8 joining the electronic circuit package and the receptacle by inserting the at least  
9 one insertable feature into the at least one insertable contact.
- 1 21. The method of claim 20, further comprising applying a sustained, vertical,  
2 compressive force to compress the at least one non-insertable feature toward the at least  
3 one non-insertable contact.
- 1 22. The method of claim 20, further comprising applying a sustained, normal force to  
2 compress the at least one insertable feature toward a conductive surface within the at least  
3 one insertable contact.

1 23. The method of claim 22, wherein applying the sustained, normal force comprises  
2 engaging a low insertion force mechanism.

1 24. A method comprising:  
2       interchanging input/output signals between first electronic circuits, which use or  
3 produce the input/output signals, and one or more non-insertable features at a first surface  
4 of an electronic circuit package; and  
5       interchanging power between second electronic circuits, which consume the  
6 power, and one or more insertable features at the first surface, wherein the electronic  
7 circuit package houses the first electronic circuits and the second electronic circuits.

1 25. The method of claim 24, wherein interchanging the input/output signals  
2 comprises interchanging the input/output signals between the first electronic circuits and  
3 one or more land grid array lands.

1 26. The method of claim 24, wherein interchanging the power comprises  
2 interchanging the power between the second electronic circuits and one or more low  
3 insertion force features.

1 27. An electronic system comprising:  
2       an electronic circuit package having at least one non-insertable feature at a first  
3 surface of the package, and at least one insertable feature extending perpendicularly from  
4 the first surface;  
5       a receptacle, coupled to the electronic circuit package, and having at least one  
6 non-insertable contact and at least one insertable contact, wherein when the electronic  
7 circuit package is joined with the receptacle, the at least one non-insertable contact makes  
8 conductive contact with the at least one non-insertable feature, and the at least one  
9 insertable contact accepts the at least one insertable feature;  
10       one or more integrated circuits located on the electronic circuit package; and  
11       a display coupled to the electronic circuit package.

1 28. The electronic system as claimed in claim 27, further comprising a device to  
2 apply a sustained, vertical, compressive force to increase a contact pressure between the  
3 at least one non-insertable feature and the at least one non-insertable contact.

1 29. The electronic system as claimed in claim 27, further comprising a device to  
2 apply a sustained, normal force to increase a contact pressure between the at least one  
3 insertable feature and the at least one insertable contact.

1 30. The electronic system as claimed in claim 27, wherein the electronic system  
2 comprises a server computer.